

Chemical Engineering Basics MCQ Question Answer

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Question: 1. While the oxy-acetylene flame produces a temperature of 3200°C , the temperature produced by oxy-hydrogen flame is about _____ $^{\circ}\text{C}$.

- Option A. 1800
- Option B. 2000
- Option C. 2400
- Option D. 3000

Question: 2. Steel containing low percentage of nickel, chromium & tungsten are termed as the _____ steel.

- Option A. Wrought
- Option B. Tool
- Option C. Alloy
- Option D. Plain carbon

Question: 3. The main constituent of bones is

- Option A. CaF_2
- Option B. $\text{Ca}_3(\text{PO}_4)_2$
- Option C. CaCO_3
- Option D. CaCl_2

Question: 4. Water-tube boiler is the one, in which

- Option A. Water passes through tubes and flue gases around it
- Option B. Tube carrying hot flue gases are immersed in a pool of water
- Option C. Tubes are placed in vertical position
- Option D. None of these

Question: 5. Which of the following equipments is used for liquid dispersion?

- Option A. Packed column
- Option B. Venturi scrubber
- Option C. Bubble cap plate column
- Option D. Wetted wall column

Question: 6. _____ is the most important element, which controls the physical properties of steel.

- Option A. Manganese
- Option B. Silicon
- Option C. Carbon
- Option D. Vanadium

Question: 7. Lap joints are preferred over butt joints in soldering/brazing, because these joints are

- Option A. Weaker in tension but stronger in shear
- Option B. Weaker in shear but stronger in tension
- Option C. Stronger in both shear and tension
- Option D. The lap joints are easily made

Question: 8. For the Stoke's law to be valid in the case of a falling sphere in a fluid, the

- Option A. Reynolds number (based on sphere diameter) should be < 1
- Option B. Flow around the sphere should be in turbulent region
- Option C. Sphere must be metallic
- Option D. Fluid density should be constant

Question: 9. The pressure drop per unit length for laminar flow of fluid through a long pipe is proportional to (where, A = cross-sectional area of the pipe & D = Diameter of the pipe)

- Option A. A
- Option B. D
- Option C. $1/A$
- Option D. $1/A^2$

Question: 10. Out of the following, the most malleable material is

- Option A. Copper
- Option B. Aluminium
- Option C. Wrought iron
- Option D. Lead

Question: 11. Pick out the wrong statement.

- Option A. For a pressure vessel to be classified as 'thin vessel', the ratio of wall thickness to mean radius is less than 0.1
- Option B. For calculating forces and efficiency of riveted joint, either rivet diameter or rivet hole diameter is used in case of pressure vessel and in structural work
- Option C. Longitudinal joint is normally made butt joint to maintain the circularity of the vessel
- Option D. Maximum diameter of the opening provided in a pressure vessel, which does not require any compensation is 200 mm

Question: 12. _____ is used for tying the steel columns to concrete foundation.

- Option A. Grouting
- Option B. Eyebolt
- Option C. Anchor bolts
- Option D. Refractory castables

Question: 13. Cold heading or upsetting is categorised as the _____ process.

- Option A. Extrusion
- Option B. Bending
- Option C. Rolling
- Option D. Forging

Question: 14. Which of the following materials does not form adherent oxide film on surface?

- Option A. Copper
- Option B. Nickel
- Option C. Aluminium
- Option D. Gold & silver

Question: 15. What is the value of entropy at 273°K?

- Option A. 0
- Option B. 1
- Option C. ∞
- Option D. None of these

Question: 16. In inventory control theory, the economic order quantity (EOQ) is the

- Option A. Lot size corresponding to break even analysis
- Option B. Average level of inventory
- Option C. Optimum lot size
- Option D. None of these

Question: 17. Which of the following contributes maximum as main source of sulphur in the blast furnace charge?

- Option A. Sinter
- Option B. Coke
- Option C. Iron ore
- Option D. Limestone

Question: 18. Fire in fuel gas pipelines is extinguished most effectively by

- Option A. Spraying water
- Option B. Blanketting the area with nitrogen atmosphere
- Option C. Fire fighting foam
- Option D. None of these

Question: 19. Holes for riveting purposes should be preferably made by

- Option A. Cutting torch
- Option B. Drilling
- Option C. Punching
- Option D. None of these

Question: 20. Sudden fall of atmospheric pressure by a large amount is an indication of the

- Option A. Rain
- Option B. Cold wave
- Option C. Storm
- Option D. Fair weather

Question: 21. Diamagnetic materials

- Option A. Are magnetised by eddy currents only
- Option B. Are non-magnetic and cannot be magnetised
- Option C. Are magnetised in direction opposite to the magnetic field
- Option D. Can be magnetised in one direction only

Question: 22. The kinematic viscosity (in stoke) and the absolute/dynamic viscosity (in poise) are the same for _____ at room temperature.

- Option A. Air
- Option B. Water
- Option C. Mercury
- Option D. Alcohol

Question: 23. The escape velocity of a body on earth which is independent of its mass is about _____ km/second.

- Option A. 3
- Option B. 7
- Option C. 11
- Option D. 15

Question: 24. Hardening of steel is not possible, unless it is heated _____ critical point.

- Option A. Above the highest
- Option B. Above the lowest
- Option C. Between the first & second
- Option D. Between the second & third

Question: 25. Which of the following is an undesirable property of slag produced during the Pyrometallurgical method of metal extraction from its ore?

- Option A. High fusibility & fluidity
- Option B. High thermal conductivity
- Option C. Low density
- Option D. High chemical activity

Question: 26. Out of the following, which will fracture most readily, when hit with a hard hammer?

- Option A. Brass
- Option B. Bronze
- Option C. German silver
- Option D. Cast iron

Question: 27. The amount of water evaporated in kg per kg of fuel burnt in a boiler is called the _____ of a boiler.

- Option A. Evaporative capacity
- Option B. Evaporation efficiency
- Option C. Thermal efficiency
- Option D. Steam load

Question: 28. Which one is neutral in character?

- Option A. N_2O_4
- Option B. N_2O
- Option C. N_2O_5
- Option D. N_2O_3

Question: 29. Thermal efficiency of an internal combustion engine is around _____ percent.

- Option A. 8
- Option B. 35
- Option C. 65
- Option D. 80

Question: 30. The same volume of all gases is representative of their

- Option A. Specific gravities
- Option B. Densities
- Option C. Gas characteristic constants
- Option D. Molecular weights

Answer Sheet

1	B	
2	D	
3	B	
4	A	
5	B	
6	C	
7	D	
8	C	
9	C	
10	D	
11	B	
12	C	
13	D	
14	D	
15	A	
16	C	
17	B	
18	B	
19	B	
20	C	
21	C	
22	B	
23	C	
24	B	
25	B	
26	D	
27	A	
28	B	
29	B	
30	D	